

REMARKS

The present amendment is submitted in response to the Office Action dated August 1, 2008, which set a three-month period for response, making this amendment due by November 1, 2008.

Claims 2-11 and 15-25 are pending in this application.

In the Office Action, claims 4-5 and 7-8 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1-2 and 12 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,450,103 to Svensson. Claims 3-4 were rejected under 35 U.S.C. 103(a) as being unpatentable over Svensson in view of U.S. 2004/0096575 to Takahashi et al. Claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Svensson in view of Takahashi et al in view of U.S. 2003/0089581 to Thompson et al. Claims 6-7 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Svensson in view of Takahashi et al in view of U.S. 2003/0104246 to Watanabe et al. Claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over Svensson in view of Takahashi et al in view of Watanabe and in view of Thompson et al. Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Svensson in view of Takahashi et al in view of Watanabe et al in view of U.S. Patent No. 5,140,208 to Tozoni. Claim 11 was rejected under 35 U.S.C. 103(a)

as being unpatentable over Svensson. Claim 13 was rejected under 35 U.S.C. 103(a) as being unpatentable over Svensson in view of U.S. 2004/0144960 to Arai et al.

In the present amendment, the phrase “depending on the sliding surface material” has been canceled from claims 4-5 and 7-8 to address the rejection under Section 112, second paragraph.

Standard sectional headings have been added to the specification and references to the claims have been deleted.

Claim 1 has been canceled and new independent claim 14 was added. Claims 12 and 13 also were canceled. New claims 14 and claims 2-11 are directed to a guideway. New claims 15-25 are directed to a magnetic levitation railway, the substantial difference being that claim 15 includes the skid material according to former claim 13.

As disclosed in the specification in the “background” section, the present invention does not have the object of providing the sliding surfaces of the guideways with a material that is adapted to brake the vehicles in case of emergency, but to design the sliding surfaces and the sliding properties of both the sliding surfaces and the skids such that defective vehicles can reach a repair/maintenance facility in the event of a defect by merely sliding (i.e., without driving forces. See page 2, first paragraph, of the

specification). A repair/maintenance facility might be miles away from where the defect occurs; thus, the sliding properties between the skids and the sliding surfaces must be the best possible (see page 2, second paragraph, of specification).

The present invention as defined in new claims 14 and 15, therefore, defines that the sliding surfaces are provided with a coating having at least in an outer layer a ground (matrix) material to which a tribologically active and wear reducing additional material is admixed. This is disclosed in particular on page 5, second and fourth paragraphs, and on page 6, first three paragraphs, of the present application. As disclosed there, the ground material, for example, is an epoxy resin to which the wear and friction reducing additional material in the form of graphite or polytetrafluoroethylene is admixed (see also page 8, second paragraph, and page 9, second paragraph of the specification).

An advantage of the present invention is that the coefficient of sliding is very small and the wear resistance is very high (see page 8, fourth paragraph of the application) and that commercially available materials still can be used. This is important because it is necessary to coat the entire guideway, that is, along a number of kilometers, with the claimed materials.

The Applicants respectfully submit that new claims 14 and 15 are not anticipated or rendered obvious by the cited reference to Svensson. Furthermore, the Applicants

disagree with the Examiner's analysis of this reference. The Applicants agree that reference numeral 14 shows a guideway carrier (column 5, last paragraph). However, is it not correct that element 158 is a skate or skid as the Examiner claims in section 4 of the Office Action. According to Fig. 7 and column 9, line 27 through column 10, line 40 of Svensson, the guideway 14 has a planar top surface 112 (see also column 5, line 61) and emergency drive wheels 160 and emergency guide wheels 162, which correspond to the skids of the present invention. Furthermore, the vehicle 130 has traveling guide magnets 158 as well as drive magnets 152 cooperating with the traveling guide magnets 158 in order to bring the vehicle into a levitated condition during travel. In the event of an emergency, the vehicle is set down to the guideway by means of the emergency drive wheels 160, as shown in Fig. 7. It follows that the vehicle in Svensson has no skates (skids) but wheels, and can be moved by means of wheels on the guideway, if necessary. No skids and sliding surface are necessary in such a case.

In addition, at column 24, lines 36-38 of Svensson, nothing is disclosed with regard to sliding surfaces or coatings. Rather, it is disclosed only that electromagnets 155 interact with stabilizer guide tracks 26, preferably comprised of an iron core with an aluminum coating so as to provide support and guidance to the vehicle 30. As shown in Fig. 42, the carrying and guiding magnets 155 never come to slide on the guide track parts 26 because of the wheels 52. If the magnets 155 would slide on the guide track parts 26 in the event of an emergency, then the magnets would carry the entire weight of the vehicle and would be destroyed in seconds.

Apart from this disclosure, nothing is disclosed in column 24 with respect to additional material which reduces friction and wear. Therefore, Svensson cannot anticipate the present invention as defined in the claims.

The only portion of the Svensson citation where the materials Teflon and graphite are mentioned is in column 18, lines 15-22. It should be pointed out that this text portion has nothing to do with a skid sliding on a sliding surface of a guideway in case of emergency, but simply with a bearing between a bearing support 938 and a frame of the vehicle, as disclosed in column 17, line 56 through column 18, line 22. Here, it is disclosed that a bearing support 9121 having a sliding surface 938 transfers the weight of the vehicle through a turntable ring 936 to air cushion pads 9125. In other words, a bearing support surface carrying the vehicle floor frame 934 is described, as clearly shown in Fig. 22.

Even if in this case the sliding surface 938 is made of a hard material having a low sliding friction coefficient, such as Teflon and graphite, this has nothing to do with the present invention as defined in new claims 14 and 15, particularly, not with the sliding of a skid on a sliding surface of a guideway in case of emergency. The present invention is not concerned with a sliding surface 14 or 19 per se (see Figs. 2 and 3 of the present application), which is coated with Teflon or graphite, but with the problems disclosed on page 1, last paragraph, and page 2, first paragraph. In contrast to Svensson, as defined in the new claims, the sliding surface is coated with a ground or

matrix material to which an additional material is admixed (which can, but must not necessarily comprise Teflon or graphite, as defined in claim 2 in such a manner that the vehicle can be moved on its skids over a long distance in case of an emergency. If only Teflon or graphite were used, it would not be possible to provide a material that is compatible with the skid material such that the resulting sliding properties are more or less accidentally up to now (see page 1, lines 25-26 of the specification).

Thus, the Svensson reference is not concerned with the problem and object underlying the present invention as argued in section 4 of the Office Action.

In section 6 of the Office Action, claim 3 (and new claim 17) are rejected over the combination of Svensson and Takahashi. While Takahashi discloses a magnet with a layer of polyurethane, the Applicants respectfully submit that this does not render obvious the present invention. Takahashi are concerned with a magnetic recording medium (see the abstract, claim 1 and paragraphs [0002] through [0004], [0007], and page 2, paragraph [0016] of Takahashi). In paragraph [0173], Takahashi only describes how to mix a specific coating solution. The Applicants are not clear as to why the Examiner argues that a coating which is made for improving the C/N ratio or S/N ration in the high density recording field (page 2, paragraph [0016]) makes obvious a coating which is designed in such a manner that a magnetic levitation vehicle can slide with its skids on a sliding surface of a guideway over a long distance in case of emergency.

In addition, the Examiner's analysis is incorrect on page 4, line 6 of the Office Action that Svensson discloses a layer made of up polyurethane. The word "polyurethane" is not found in the entire Svensson reference.

Furthermore, Svensson and Takahashi do not render obvious the use of a coating having several layers wherein at least one outer layer is made of polyurethane or the like. Takahashi only teaches coating a magnet with a single layer coating of polyurethane but not with a multi-layer coating.

Because the new independent claims include features that are not disclosed or suggested by Svensson, the rejection under Section 102 must be withdrawn. Applicants furthermore respectfully submit that Svensson is not a proper reference under 35 USC 102 pursuant to the guidelines set forth in the last paragraph of MPEP section 2131, where it is stated that "a claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference", and that "the identical invention must be shown in as complete detail as is contained in the ... claim".

It is noted that the Information Disclosure Statement filed by Applicant has not been considered because it does include a concise explanation of relevance.

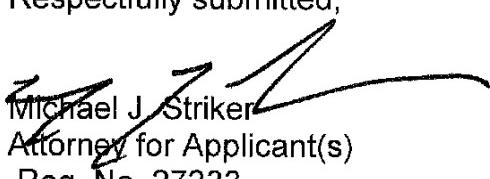
However, Applicant wishes to note that the prior art submitted by Applicant was mentioned in the specification of the Application, and the IDS does set forth the page and line in the specification where the prior art is mentioned.

This qualifies as a concise statement of relevancy. Section 609.04(a)III states in part the following: "The concise explanation may be...part of the specification. If the concise statement is part of the specification, the IDS listing should include the page(s) and line(s) numbers where the concise explanation is located in the specification."

In view of the above, consideration of the IDS is respectfully requested.

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,



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